

ICOM

VHF MARINE TRANSCEIVER

IC-M504A

**DSC Built-in
Class D**

Submersible

1.5m depth for 30 minutes

PLUS

FORCE 5 AUDIO™

Rugged

MIL-STD 810



The Submersible PLUS Marine VHF with Class D

MARINE VHF TRANSCEIVER

IC-M504A



Black version



Gray version

IPX8 Submersible PLUS (1.5m depth for 30 minutes)



The IC-M504A withstands submersion in up to 1.5m depth of water for 30 minutes. It is equivalent to the IPX8 standard. All products are rigorously checked to pass the quality test at the factory.

Large LCD with dot-matrix characters

The IC-M504A has a 168-character, full dot-matrix display that allows you to easily view a variety of information, such as GPS data, DSC emergency data, etc. The large buttons and knobs provide user friendly operation.



▲ 37×73mm (1.46×2.87 in) size full dot-matrix display



DSC

ITU Class D DSC

The IC-M504A has two receivers, one for the radio and one to monitor channel 70 for DSC all the time. When a distress call is received, an escalating alarm sounds and the transceiver automatically switches to channel 16. The auto switch and auto tune timer functions allow you to control the timing to switch. Compliant to new DSC class D regulations.

DSC Built-in Class D

Position Request and Position Report

Over and above the DSC, your own and other ships' position data can be exchanged with the position request or position report functions. The received position information can be transferred to external navigation equipment*. In addition, the polling (request/reply) function checks whether a specific ship is within the communications range.

* External GPS receiver and navigation equipment which accepts NMEA 0183 format is required.

Superior receiver performance

The IC-M504A has excellent receive specifications of 80dB (typical) for intermodulation and channel selectivity, and 0.22µV (typical) high sensitivity. It's superior receiver provides excellent resistance to intermodulation and allows you to catch a weak signal between strong stations.

Excellent audio output power

The extra large speaker is mounted into a well-spaced housing, producing greater sound than the specified 4.5W output power. You can get clear and loud reception without requiring repetition of the message, even over the engine or other background noise.

FORCE 5 AUDIO™

25W hailer/RX speaker and auto foghorn

When connected to a hailer horn or external speaker on the deck or tower, you can make an announcement on-board from the microphone. The RX speaker function, "receiver-repeater", allows you to monitor the received audio. Four foghorn patterns are also available for the automatic foghorn.



Rear panel microphone version*

With this version, the microphone connector is drawn from the rear panel and a 6.1m (20ft) microphone extension cable is supplied to allow you clean and neat panel installation.

* Ask your dealer for details



Other features

- Dual/tri-watch function for monitoring Ch.16 and/or call channel
- Instant access to Ch. 16 and call channel
- 7 levels adjustable backlit display and keypad
- Convenient "TAG" scanning function
- Optional Voice Scrambler, UT-112 for private communication
- Weather channels with weather alert function
- Black or gray color versions



Optional fully integrated COMMANDMICIII™

Full control 2nd station capability

The COMMANDMICIII™ is a remote control for the IC-M504A that may be positioned up to 18.3m (60ft) away from the IC-M504A. All functions, including distress call, DSC, and foghorn, are available. The COMMANDMICIII™ may also be used as an intercom with the IC-M504A.

Multi-function "Jog" dial

A newly designed multi-function Jog dial gives you quick and easy access to many M504 settings, including operating channel, volume, squelch, menu settings and more.

Other features

- Full dot-matrix LCD with 7-step dimmer setting
- 2.8W (typical) external speaker terminal
- Submersible PLUS (1.5m depth for 30 minutes)
- Extra large 45mm (d) speaker for superior audio

COMMANDMICIII™



Backlit keypad and Jog dial "Distress" button on the back of the unit



Optional COMMANDMICIII™, HM-162SW ▶

SPECIFICATIONS

GENERAL

- Frequency range :
 - Tx 156.025–157.425MHz
 - Rx 156.050–163.275MHz
- Type of emission : 16K0G3E, 16K0G2B
- Usable channels : USA, INT, CAN, WX channels
- Power supply requirement: 13.8V DC \pm 15 %
- Current drain (at 13.8V DC) :
 - Transmit 5.5A (25W output)
 - Receive 1.5A (Max. AF)
- Operating temperature : -20°C to $+60^{\circ}\text{C}$; range -4°F to $+140^{\circ}\text{F}$
- Antenna impedance : 50 Ω (SO-239)
- Dimensions (W×H×D) : 165×110×123.2 mm; (projections not included) 6.5×4.33×4.85 in.
- Weight (approx.) : 1.45 kg ; 3.20 lb
- NMEA formats :
 - Input RMC, GGA, GNS, GLL
 - Output DSC, DSE

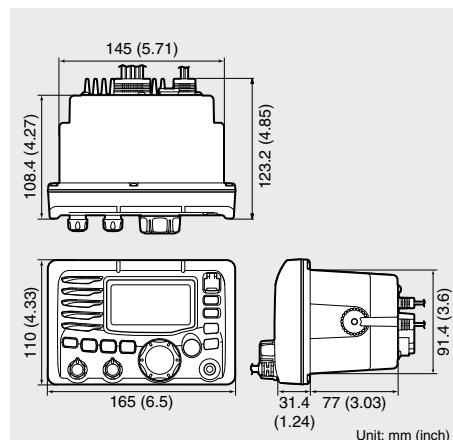
TRANSMITTER

- Output power : 25W or 1W (at 13.8V DC)
- Modulation system : Variable reactance
- Max. Freq. deviation : \pm 5.0kHz
- Frequency error : \pm 10ppm
- Spurious emissions : Less than -70dBc (at 25W)
- Residual modulation : More than 40dB
- Adjacent Ch. power : More than 70dB

RECEIVER

- Intermediate freq. : 1st 21.7MHz
31.05MHz (Ch70)
2nd 450kHz
- Sensitivity : 0.22 μV typ. (at 12dB SINAD)
- Squelch sensitivity : Less than 0.32 μV (threshold)
- Adjacent Ch. selectivity : 80dB typ. (DSC 75dB typ.)
- Spurious response : 80dB typ. (DSC 75dB typ.)
- Intermodulation : 80dB typ. (DSC 75dB typ.)
- Hum and noise : More than 40dB
- Audio output power : 4.5W typ. at 10% distortion with a 4 Ω load

DIMENSIONS



Supplied accessories:

- Hand microphone
- DC power cable
- Mounting bracket kit

Measurements made in accordance with TIA/EIA 603. All stated specifications are subject to change without notice or obligation.

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.



HM-162B/SW REMOTE-CONTROL MICROPHONE

- Size (W×H×D): 65.5×150×38 mm; 2.58×5.91×1.5 in.
Weight (approx.; except cables): 385g ; 13.6oz
Supplied accessories :
 - 6.1m (20ft) of cable, OPC-1540, with external speaker terminal
 - Microphone hanger
 - Mounting base for cable connector

OPC-1541 EXTENSION CABLE FOR HM-162B/SW

6.1m (20ft) extension cable for use with COMMANDMICIII™. Up to 2 OPC-1541 can be connected.

COMMANDMIC and FORCE5AUDIO are registered trademarks of Icom Inc. (Japan) in the U.S.A.



MB-75 FLUSH MOUNT KIT

For flush-mounting the IC-M504A to a flat surface, such as a control panel.



UT-112 VOICE SCRAMBLER UNIT

Provides up to 32 codes for private communication.

HM-126RB/RG SPEAKER MICROPHONE

Same as supplied.

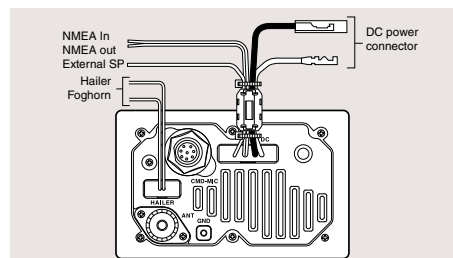
HM-157B/SW REMOTE-CONTROL MICROPHONE

COMMANDMICIII™ is also available.

OPC-999 EXTENSION CABLE FOR HM-157B/W

6.1m (20ft) of extension cable for use with COMMANDMICIII™. Up to 2 OPC-999 can be connected.

Rear panel view



Applicable U.S. Military Specifications

The IC-M504A and HM-162B/SW have been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	MIL 810 F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Rain	506.4	I, III
Humidity	507.4	-
Salt Fog	509.4	-
Dust Blowing	510.4	I
Immersion	512.4	I
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

Icom Inc.

1-1-32, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

www.icom.co.jp/world

Count on us!

Icom America Inc.

2380 116th Avenue NE,
Bellevue, WA 98004, U.S.A.
Phone : +1 (425) 454-8155
Fax : +1 (604) 952-0090
E-mail : sales@icomamerica.com
URL : <http://www.icomamerica.com>

Icom Canada

Glenwood Centre #150-6165 Highway 17,
Delta, B.C., V4K 5B8, Canada
Phone : +1 (604) 952-4266
Fax : +1 (604) 952-0090
E-mail : info@icomcanada.com
URL : <http://www.icomcanada.com>

Icom Brazil

Rua Pernambuco, 353 - Sala 901
Belo Horizonte, M.G.
30130-150, Brazil
Phone : +55 (31) 3582 8847
Fax : +55 (31) 3582 8987
E-mail : sales@icombrasil.com

Icom (Europe) GmbH

Communication Equipment
Auf der Krautweide 24
65812 Bad Soden am Taunus, Germany
Phone : +49 (6196) 76685-0
Fax : +49 (6196) 76685-50
E-mail : info@icom-europe.com
URL : <http://www.icomeurope.com>

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer"
Bajos A 08174, Sant Cugat del Valles,
Barcelona, Spain
Phone : +34 (93) 590 26 70
Fax : +34 (93) 589 04 46
E-mail : icom@icomspain.com
URL : <http://www.icomspain.com>

Icom Polska

81-850 Sopot, ul. 3 Maja 54, Poland
Phone : +48 (58) 550 7135
Fax : +48 (58) 551 0484
E-mail : icompolska@icompolska.com.pl
URL : <http://www.icompolska.com.pl>

Icom (UK) Ltd.

Blacksloe House, Altira Park,
Herne Bay, Kent, CT6 6GZ, U.K.
Phone : +44 (0) 1227 741741
Fax : +44 (0) 1227 741742
E-mail : info@icomuk.co.uk
URL : <http://www.icomuk.co.uk>

Icom France s.a.s.

Zac de la Plaine,
1 Rue Brindejonc des Moulinais, BP 45804,
31505 Toulouse Cedex 5, France
Phone : +33 (5) 61 36 03 03
Fax : +33 (5) 61 36 03 00
E-mail : icom@icom-france.com
URL : <http://www.icom-france.com>

Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road,
Clayton, VIC 3168 Australia
Phone : +61 (03) 9549 7500
Fax : +61 (03) 9549 7505
E-mail : sales@icom.net.au
URL : <http://www.icom.net.au>

Icom New Zealand

146A Harris Road, East Tamaki,
Auckland, New Zealand
Phone : +64 (09) 274 4062
Fax : +64 (09) 274 4708
E-mail : inquiries@icom.co.nz
URL : <http://www.icom.co.nz>

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road,
Taipei, Taiwan, R.O.C.
Phone : +886 (02) 2559 1899
Fax : +886 (02) 2559 1874
E-mail : sales@asia-icom.com
URL : <http://www.asia-icom.com>

Your local distributor/dealer: